Abstract

A VSTOL vehicle including a fuselage with two pairs of ducted rotors fully enclosed fore and aft of the fuselage respectively. The fuselage is aerodynamically shaped to generate lift in forward flight. All four ducts are configured such that their center axes are at angles tilted sufficiently forward from the vertical axis of the fuselage. Each ducted rotor is powered by one engine inside the duct behind the rotor. All four rotors and engine shafts rotates counterclockwise, generating substantial angular momentum for gyroscopic effect. Variable inlets of the ducted rotors and vector thrusting of the airflow out of the ducted rotors combine to provide efficient power and control during all phases of flight. The vehicle is configured to meet motor vehicle requirements to drive on streets.